



April 22, 2004

No. 43

# economics



## IT outsourcing: between starvation diet and nouvelle cuisine

- IT outsourcing is on every body's lips at the moment. It involves contracting out to external providers services and IT infrastructures that are not considered core business. Financial services providers in particular are seeking to shed unnecessary weight this way, slimming down and gearing up for tougher competition. The volumes up for negotiation are ample: in 2003 alone outsourcing contracts worth an estimated USD 18 bn were concluded between the financial services industry and market suppliers around the world.
- Across all sectors of industry, the German IT outsourcing market has already assumed sizeable proportions, and it continues to grow dynamically. IT services worth in excess of EUR 10 bn were contracted out in 2003. By 2008 we expect this volume to have risen to almost EUR 17 bn.
- But outsourcing IT services is not confined to the organisational institutional level alone. Offshore outsourcing, or "offshoring", is the practice by which companies procure IT resources and processes from cost-efficient low-wage countries, mainly India at present and increasingly so from China in the future. In the coming five years we expect processes worth USD 300 bn (an estimated USD 54 bn in 2003) to be outsourced the world over.
- In Germany, offshoring poses a direct threat to almost 50,000 IT jobs by 2008. That is a good 3.5% of the 1.4 million IT jobs we currently have here. As a rule, though, processes and positions with high value creation and strategic importance are kept in the country.
- The main business case for selectively outsourcing limited, clearly defined tasks is one of costs. But big-ticket outsourcing projects should not be launched for cost motives alone. They must be embedded in a company's strategic endeavours to focus on its core competencies.
- Outsourcing projects require careful preparation. This calls for technical and organisational competence within the outsourcing company that cannot be contracted out even after outsourcing proper has taken place. Besides the choice of service provider and the definition of Service Level Agreements etc. this entails in particular standardisation of the company's own processes ahead of outsourcing and clear definition of the interfaces to the service provider's processes. Any attempt to offload unresolved problems by outsourcing them without due reflection is condemned to failure from the outset.

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### DB Research Management

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# IT outsourcing: between starvation diet and nouvelle cuisine

## 1. Macroeconomic outlook

Outsourcing, especially of information technology (IT) infrastructures, is on every body's lips at the moment. Financial services providers in particular are seeking to shed unnecessary weight by outsourcing, slimming down and gearing up for ever tougher competition. The volumes up for negotiation are ample: in 2003 alone outsourcing contracts worth an estimated USD 18 bn were concluded between the financial services industry and market suppliers around the world. In the more immediate future we expect growth to remain dynamic, not least given the massive benefits that both outsourcers and insourcers anticipate. Yet this trend, too, is not entirely free of risk. The following study analyses the background, motives and premises for success of IT outsourcing, forecasts likely developments and discusses the economic implications for Germany and Europe in particular.

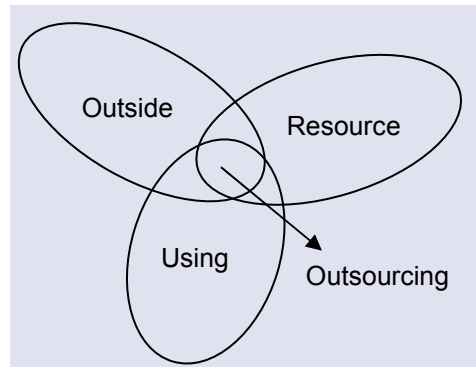
### Shortening value chains, with industry as the model

The question as to whether services should be performed in-house or procured through the market is not new. Across all sectors of the economy, services such as company canteens, vehicle fleets, facility management and cleaning, which in the 1970s were still provided by the companies themselves, are now regularly contracted out. But quite apart from this, firms and entire branches of industry differ considerably in terms of their vertical integration. In the manufacturing sector, these are typically much flatter than in the services sector. In the automotive industry even the big manufacturers sometimes perform only the final assemblage themselves. Whereas proprietary production and outsourcing are roughly on a par in the capital goods industry (and the vertical range of manufacture in the electronics industry is only around 20%), banks perform upwards of 80% of their services themselves. Even within a single sector, though, these ratios vary.

### The lean bank: industrialisation of the financial services sector

The outsourcing scene is currently dominated by banks and other financial services providers, who are contracting out IT services in particular. Primarily, they are outsourcing their IT infrastructures or entire business processes to cut costs. Apart from the reduction in personnel expenditure, the prospect of cost savings through scale economies at the insourcer appears especially attractive. The advantage lies in converting fixed into variable costs and avoiding the immediate expense of upgrading hardware.

Particularly in periods of economic downswing – economy-wide, in certain sectors and at individual institutions – pressure mounts to scale down costs in order to operate profitably. When earnings are growing dynamically, on the other hand, many sins on the cost side go undetected. Especially in the banking sector, a host of – mainly IT – projects were rolled out at the end of the 1990s, building up cost pools that, with hindsight, must be viewed critically. The budding equity culture in Germany, New Economy hype and the need for financing to which it gave rise, and a flourishing macroeconomic environment bestowed earnings growth on the financial services industry that counterbalanced the problems on the cost side. By the



Outsourcing is a hybrid term derived from "outside", "resource" and "using" and quite generally denoting the long-term or final award to outside providers of contracts for services previously produced in-house. In IT outsourcing, as one variation, IT infrastructures and application environments are contracted out to market providers, and with business process outsourcing (BPO) entire business processes. Where this also involves relocation to remote, significantly lower priced regions, the term offshore outsourcing, or offshoring, is used.

### Outsourcing: opportunities and risks

#### Opportunities

- Lower costs
- Focus on core competencies
- Greater flexibility
- Greater efficiency
- Higher service quality
- Access to state-of-the-art technology
- Shorter time to market
- Marketing of own capacities

#### Risks

- Loss of control
- Higher retraction costs
- Higher costs
- Dependence on a provider
- Personnel conflicts
- Deterioration in quality
- Loss of know-how
- Increasing complexity

### Vertical range of manufacture at banks and in industry

Automotive industry	25 Proprietary production	75 Outside production
Electronics industry	20	80
Banks	80	20

Source: DB Research

same token, the subsequent earnings crisis has considerably heightened cost awareness at German banks.

### Jack, stick to your core competencies

But strategic reasons independent of cyclical cost pressure also argue for outsourcing certain jobs. Contracting out areas that do not form part of a company's core business is designed to increase and dynamize structural growth potential on the earnings side, too. A leaner organisation that concentrates on its core business lines gains in punch, which in turn benefits its shareholders.

The specialists' more efficient production methods enable them to offer their services at rates below the marginal costs of outsourcers' proprietary production. Since the much-regarded Kodak contract, in which IT services and staff were contracted out in 1989 on a grand scale, outsourcing has been incorporated into many companies' management strategies. The financial services sector has also built up an outsourcing tradition of its own, even if attention has not honed in on big-ticket contracts until fairly recently. In 2002 alone international outsourcing contracts were concluded worth almost USD 33 bn in all, even though a substantial part of the total was down to six mega IT deals in this field.

Since the mid-1990s outsourcing activities by the banks have registered strong international growth, with insurers and other financial services providers following suit since the turn of the millennium. According to a survey by the E-Finance Lab, the aggregated total value of outsourcing contracts in the financial services sector up to 1994 was around USD 1 bn a year. Since then it has risen steadily. Adjusting the contract volumes by their duration, the annual tallies expanded by an average of 45% per annum between 1999 and 2003 to an estimated USD 15 bn at present.

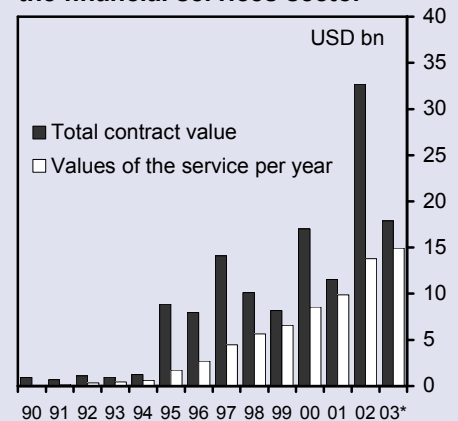
### Look before you leap: outsourcing costs ...

Outsourcing contracts are by nature long-term (5-10 years). As a rule, the decision to outsource infrastructures or processes is final. This means it requires thorough prior examination.

Pivotal to outsourcing decisions is a transaction cost<sup>1</sup> analysis. Transaction costs are the costs of market use. Turnover tax and the provider's profit margin are added to the price of market-based services. Price levels will also depend on how specific the service to be provided is and how often it is provided.

Services with low specificity should be procured through the market. But where specificity is high, external processing becomes problematic. Describing the service and putting a value on it is too complicated. Moreover, the greater the strategic importance ascribed to the work in question, the more powerful an argument

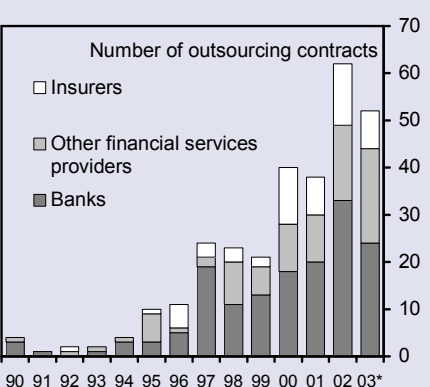
**Value of outsourcing contracts in the financial services sector**



\*) estimate

Source: E-Finance Lab, 2003

**Outsourcing contracts in different branches**



\*) estimate

Source: E-Finance Lab, 2003

<sup>1</sup> More specifically, transaction costs are understood to mean the costs of search, initiation, information, negotiation, decision-making, arrangement, handling, hedging, implementation, monitoring, adjustment and termination. For the basics on this see Williamson, Oliver. E. (1975): Markets and Hierarchies: Analysis and Antitrust Implications, New York. With regard to the transaction costs of IT outsourcing in particular see Aubert et al. (1996): A Transaction Cost Approach to Outsourcing Behaviour: Some Empirical Evidence, in: Information & Management, No. 30, pp. 51-64; Lacity, M. C. and R. Hirschheim (1993): Information Systems Outsourcing. Myths, Metaphors and Realities, New York i.a.; Nam, Kichan et al. (1995): Dimensions of Outsourcing: A Transaction Cost Framework, in: Mehdi Khosrowpour (ed.), Managing Information Technology Investments With Outsourcing, Harrisburg i.a., pp. 104-128; Picot, Arnold and Matthias Maier (1992): Analyse- und Gestaltungskonzepte für das Outsourcing, in: Information Management, No. 4, pp. 14-27.

against outsourcing the threat of losing expertise within the company becomes.

The situation is quite the reverse, though, where standardisation is extensive, for example with hardware or office software. However, the services in question must have been standardised in advance, and not in the course of the outsourcing process. Where specificity is conditional not on any strategic importance for the company, but on the existence of old IT liabilities within the company, in the medium and long term it would be advisable to switch to standard systems and outsource the work.<sup>2</sup>

**... and loss of control with contracting out**

In the past, distinct information asymmetries have been found to exist when outsourcing business processes. That is to say the market supplier (insourcer) has far better knowledge of its capabilities, cost structure and internal processes than the outsourcing company (so-called principal-agent problem<sup>3</sup>). What is more, principals and agents are pursuing different aims. Ultimately, it is very difficult for the principal to judge whether and to what extent the particulars made in an offer are correct or how reliable an agent's reputation is. Of course a used car dealer will always be more aware of the hidden defects of his vehicles than the potential buyer. With IT outsourcing, external processing could conceivably lead to inadequate security standards and shortcomings in data protection, for instance. Nor are the lower costs passed on.

When contracting out, in effect the outsourcer irrevocably surrenders control. The agency problems mentioned must be addressed in sufficient depth ahead of the outsourcing process if serious damage is to be avoided. As a rule this will be done by means of detailed contracts including Service Level Agreements (SLA). But there is still a danger that the necessary monitoring costs will eat up the cost-savings of outsourcing. So careful examination is required in this respect, too.<sup>4</sup>

**Value of IT: indispensable basic innovation ...**

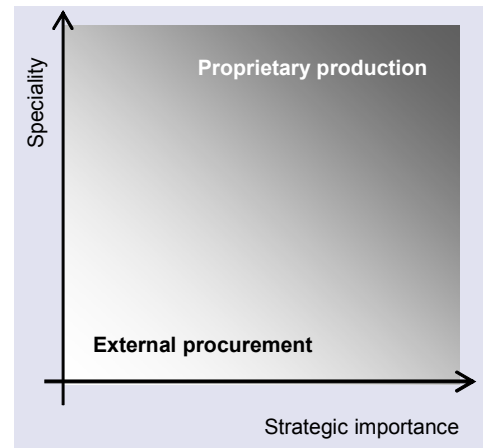
The current importance of IT outsourcing, particularly for financial services providers, is testament not only to the more acute cost-awareness of a crisis-ridden industry. It also flags up the altered position of information technology. Meanwhile, IT forms the undisputed backbone of the economy and, as such, has become indispensable. And since its emergence, information technology has become ever more powerful, penetrating all parts of our life.

- In April 2002 the billionth PC in the world was delivered. The United States heads the rankings with 39%. Western Europe, which had about 249 million PCs, accounted for around 25%.

<sup>2</sup> See Henkel, Joachim and Ulrich Kaiser (2003): Fremdvergabe von IT-Dienstleistungen aus personalwirtschaftlicher Sicht, ZEW Discussion Paper No. 02-11, on outsourcing IT services.

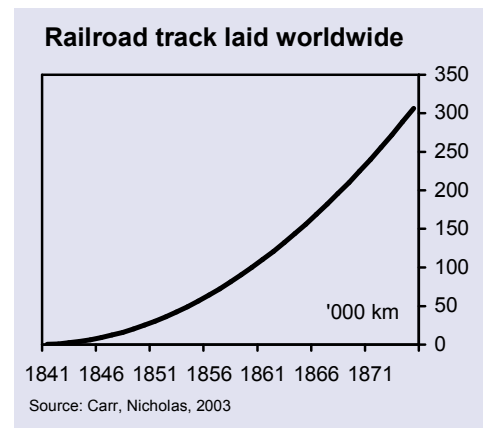
<sup>3</sup> But the principal-agent problem can also arise within a company, particularly with complex areas of work such as IT processes. There is a danger of opportunistic behaviour among in-house IT staff inasmuch, for example, as exaggerated claims are made to management on the complexity of certain tasks, on the scale of services rendered or on the necessity to expand hardware, software or the headcount.

<sup>4</sup> In a survey of manufacturing industry in Germany for the period from 1992 to 2000 Görzig/Stephan come to the conclusion that firms that increase the proportion of external services relative to their internal payroll costs achieve worse corporate performance than others. See Görzig, Bernd and Andreas Stephan (2002), Outsourcing and Firm-level Performance, DIW Discussion Paper 309, Berlin.



**Information asymmetries typical**

**Monitoring costs versus cost savings**



The next billion is expected already in 2007 or 2008. This doubling in figures will be down mainly to China, Latin America, eastern Europe and India.

- In Germany alone the number of PCs soared from 6.5 m in 1990 to more than 36 m in 2002. That is consistent with average annual growth in the region of 17%. At present more than 40% of Germans own a PC.
- The number of internet hosts worldwide expanded between 1990 and 2001 from 43,000 to just over 150 m. In Germany their number surged from around 8,000 in 1990 to almost 2.6 m in 2002. That represents average growth of almost 70% a year.

Given such breakneck escalation in a young basic technology, one is tempted to make the historical comparison with the railways, telephony or electricity. Like these network goods, ICT technology has spread at a rapid pace. In many areas it is already approaching saturation point or, indeed, has already done so.

### ... losing strategic importance

This ubiquity does, however, reduce the strategic importance of information technology, as certain sections degenerate into mass commodity inputs.<sup>5</sup> While the IT infrastructure remains an important determinant of competition at the macro level, its general availability to all and sundry in the wake of falling prices makes it increasingly unsuitable at company level as a means of distinguishing any one firm from its competitors.

Standardised IT services such as data backup, data storage and infrastructures require high-quality, trouble-free and, most importantly, low-cost access. Negative risks exist inasmuch as failures would cause considerable damage. Smooth supply is therefore vital. But providing these services in-house does not give a company any competitive edge on its rivals. Uninterruptible power supply must be guaranteed at any firm; access to transport hubs such as railway stations must be convenient and close. But this does not call for in-house power plants or railway lines.

General availability will automatically stymie any attempt by a company to set itself apart from its competitors with in-house IT. That is one explanation why firms are now seeking to gain a competitive edge by outsourcing IT infrastructures and processes.

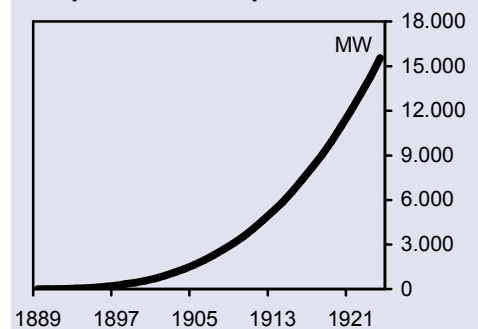
### IT outsourcing market: hoping for a win-win situation

Many firms are therefore contracting out IT services and infrastructures they do not consider to be of strategic importance. The German IT outsourcing market has already assumed sizeable proportions, and it continues to grow rapidly. IT services worth in excess of EUR 10 bn all told were outsourced 2003 in Germany. By 2008 we expect this value to have hit almost EUR 17 bn, which means the market will expand by about 11% a year. But within this period it will lose momentum.

For Europe we expect IT services worth upwards of EUR 45 bn to be outsourced in 2003. Market volume at the European level is likely to be ratcheted up to EUR 100 bn by 2008, with Germany and the United Kingdom together accounting for a good half of the market.

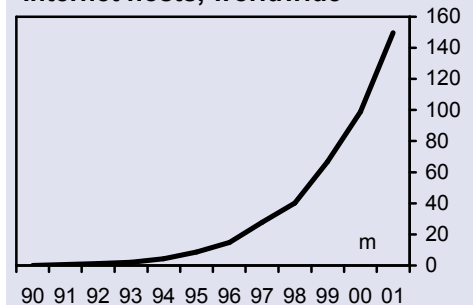
Especially dynamic growth will come from the financial services industry. Banks and insurance companies will dominate the

**Capacities at US power utilities**



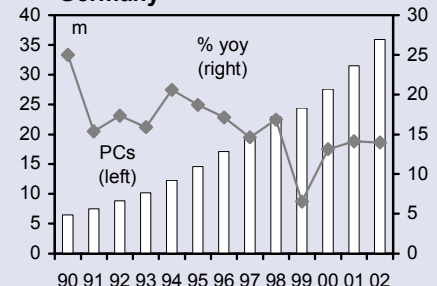
Source: Carr, Nicholas, 2003

**Internet hosts, worldwide**



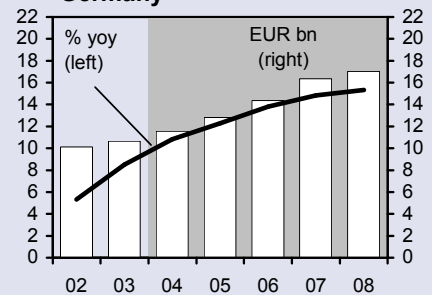
Sources: DB Research, ITU, 2003

**Personal computers in Germany**



Source: ITU, 2003

**IT outsourcing market Germany**



Sources: Meta Group, DB Research Schätzung, 2003

<sup>5</sup> Carr, Nicholas G. (2003): IT doesn't matter, in: The Harvard Business Review, May 2003.

outsourcing scene in the coming years, driven by their deep vertical range of manufacture, information-intensive operations with a high degree of standardisation for much of their IT, and intensive cost and consolidation pressure within the industry.

Established companies in particular will act as insourcers, i.e. firms offering IT services or infrastructures on the market. In Germany the four biggest providers cover a good 80% of the market, and the three largest roughly 75%. This concentration makes sense inasmuch as a certain minimum size is necessary to realise economics of scale economies. Besides which, the reputation of an established provider can help mitigate the principal-agent problems previously mentioned. A small group will therefore continue to corner the market. However, it is important that a sufficient number of providers remain to guarantee a competitive environment. In a monopolistic situation the cost-savings of mass production will go into the supplier's own margins rather than being passed on to the customer.

### IT offshoring: value chains globally re-linked

But outsourcing IT infrastructures, through to entire business processes, is not confined to the organisational institutional level alone. Increasingly, these services are also being shifted across large geographic distances. Offshore outsourcing, or "offshoring", is the practice by which companies procure IT resources and processes from cost-efficient low-wage countries, mainly India.

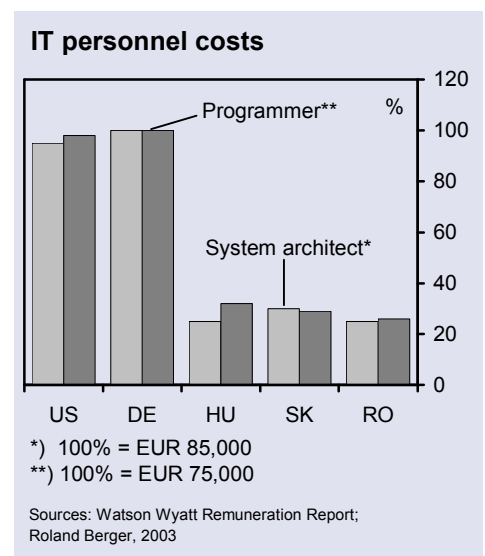
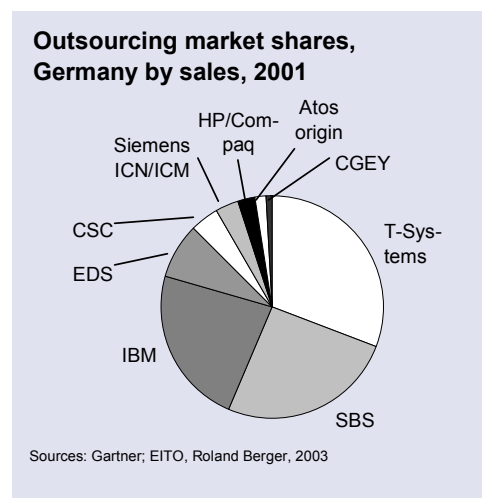
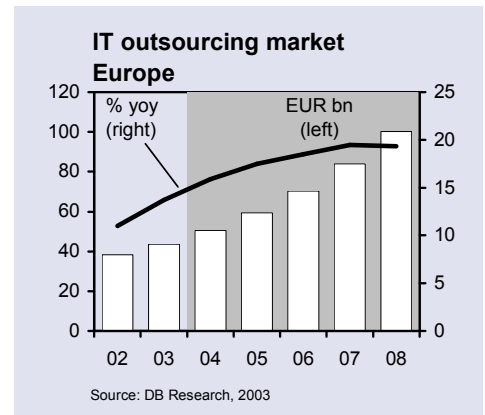
Globally distributed value chains are nothing new. Lower wage costs and more company-friendly framework conditions have traditionally been the reason for moving production to other countries. In the 1980s electrical and mechanical engineering production facilities were relocated to Asia in particular. What is new, though, is that services – and not just rudimentary tasks – are being provided and procured on an intercontinental scale. Basically, there are two reasons for this structural shift:

- First, modern IT enables the digitisation of information-intensive services. That affects a large part of office work. As a result, it can be copied and stored fairly easily.
- Second, globally networked telecommunications lines and the tumbling costs of their use are paving the way for the global distribution of digital goods and hence for their international trading. In the meantime, the lines of communication are sufficiently stable even between industrial countries and the Third World. In the pre-digital age services had to be produced and consumed at the same place and time.

In other words, information and communications technology has paved the way for services to join the league of internationally tradable goods. This is most particularly true of IT services themselves. It means that the cost benefits of remote locations can now also be exploited for services.<sup>6</sup>

### IT offshoring offers high quality at low prices ...

In principle, the benefits and risks of IT offshoring are the same as with local outsourcing, although they are considerably greater in amplitude. The key advantage lies in the lower cost of the work. For financial services in particular, offshoring could feasibly cut costs by between 30 and 50%. Wages are the most important lever. The daily



<sup>6</sup> See Deutsche Bank Research, Business locations in a networked world, E-economics No. 30, August 2002, on the IT-driven shift in importance of locational factors.

rates for Indian programmers, including local infrastructure, the provider's margin and other procurement costs, range between EUR 140 and 200. In Germany daily rates of EUR 600 to more than 1,000 must be pencilled in. Added to this are the effects of more favourable tax and regulatory systems. In some cases, too, the quality of the staff and hence the services provided are significantly higher. Excellently trained IT specialists and objective process assessment (Six Sigma, Capability Maturity Models), catering to the most exacting international requirements are the hallmarks of offshore service providers. What is more, employees in low wage countries are more highly motivated when, say, performing basic IT services considered to be of low prestige in western countries. Finally, 24-hour, seven-day availability is generally the rule, more than making up for the problem of different time zones.

**Offshore providers: 24 hours a day, 7 days a week**

**... but also entails specific risks**

The microeconomic risks of offshoring have been substantially reduced meanwhile, with quality standards and on-site management distinctly improving the level of service. Yet problem areas do arise with the geographic distance in particular, notwithstanding more efficient, modern ICT. Highly specific, business-critical tasks requiring regular consultation and amendment are not therefore suitable for IT offshoring. All that remain are standardised, clearly structured and modular processes on which it is easy to work together.

Added to these business management problems are specific country risks. Political stability, reliable legal and institutional framework conditions and a developed, stable technical infrastructure are vital prerequisites if offshoring projects are to work. And particularly in the IT sector, the danger of industrial espionage or inadequate protection of intellectual property is obvious. Potential principals must be aware of this beforehand. Finally, far less tangible, but none the less serious are linguistic and cultural barriers. Indian programmers expect different instructions than those that western principals typically issue. Language difficulties outside the English-speaking area are another obstacle that should not be underrated – not only when it comes to drawing up contracts.

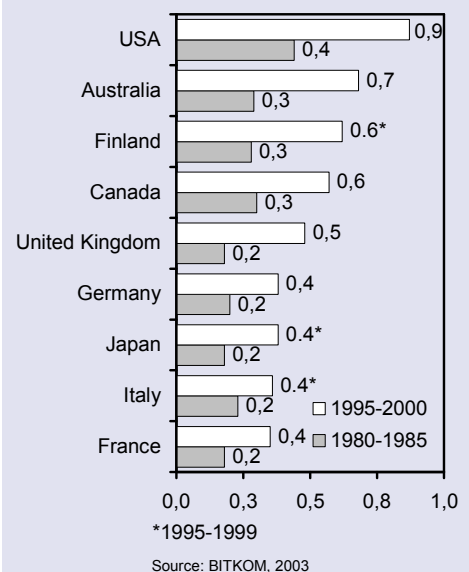
These difficulties can be addressed by engaging the services of specialised offshoring agents in the home country, for example. They are familiar with clients' specific requirements and wishes as well as with the working practices and reputation of the providers in their respective offshore regions.

**IT offshoring: a recipe for plentiful business worldwide ...**

The IT offshoring market is enjoying headlong growth, although most of the outsourcing firms are domiciled outside Europe. At present, 70 to 80% of offshoring orders are generated in the United States, where companies have been cooperating extensively with offshore service providers for more than ten years. For the coming five years we expect processes worth altogether EUR 300 bn to be contracted out. This compares with an estimated EUR 54 bn in 2003.

India is the major offshoring partner for the USA. 90% of American companies favour the subcontinent as an offshore location. Meanwhile, services constitute by far the biggest economic sector in India, accounting for 49% of gross domestic product (industry 27%) – a distribution that tends to be far more typical of a developed than

**Contribution of ICT investment to economic growth**  
(in percentage points)



a developing country. But the Philippines, and increasingly China, are also gaining in favour with US firms (with a share of 20% each).

In Germany, on the other hand, offshoring business is proving slow to get off the ground, mainly because of the language. That said, Germany also has greater reservations about entering into an intensive business dialogue with foreign cultures than, say, the USA. In the foreseeable future we do not therefore expect such dynamic offshoring trends in Germany as America.

ven so, the potential is not to be underestimated. All told, by 2008 German companies will presumably outsource IT services worth a total of roughly EUR 2.5 bn to offshore regions, up from EUR 400 m at present. Increasing standardisation and automation of IT processes and the possibility of using specialised local outsourcing agents are buoying the strategy. Moreover, east European EU accession countries are gaining in attraction as nearshore locations for central European countries. While India is likewise the most attractive location for central European countries with offshoring ambitions, with a share of 45%, 18% favour Hungary, Slovakia and Romania and almost 10% each opt for Belarus and the Czech Republic. The combination of low labour costs, high specialist qualifications and the desired language skills, increasingly reliable legal framework conditions, the assumption of IT and telecommunications standards in the course of EU accession and relative geographic proximity support this assessment.

**... with side effects in the home country**

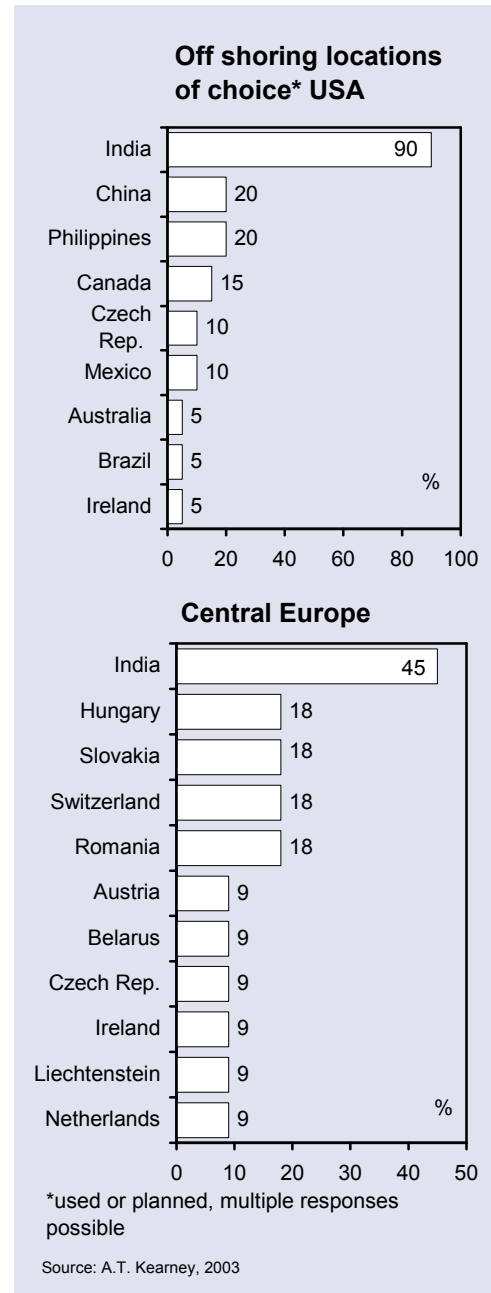
What consequences does this trend to increased offshoring have? An open, innovative economy can use its comparative advantages to further refine its production. The spectre of direct job losses attendant on process outsourcing contrasts with a number of positive aspects:

- Lower production costs enable the outsourcing companies to boost their competitiveness, profitability and hence the firm's value. As with direct investment, this secures the jobs that are not outsourced.
- The orders placed in offshore regions generate revenues and profits there. Depending on the structure and intensity of trade relations, funds flow back to a greater or lesser extent through additional exports.
- As less productive activities migrate to offshore regions, so the workers freed up at home can carry out more lucrative tasks – providing they are well trained, the labour market is flexible and the level of employment high.

**Rochades on the global jobs market**

With the lion's share of global off shoring, the United States will pocket welfare gains on balance. Its flexible labour market and the innovativeness of its companies secure its global market leadership industry-wide. Off shoring is a strategic instrument here. Although up to half a million jobs in the IT sector will be relocated to offshore regions by 2015, net welfare gains in the region of 10 to 15% of the total off shoring volume should create a sufficiently large number of new and more productive jobs at home.

For Europe in general (with the exception of the UK) and Germany in particular these effects are to be expected only in diluted form, given that off shoring is of far less importance and the IT sector considerably smaller. The average contribution to economic growth by IT investment is more than twice as high in the USA as in



**Net welfare gains likely from off shoring**

Germany, for example. The impact on the labour market will therefore be correspondingly less. Even so, off-shoring will put almost 50,000 IT jobs in Germany directly on the line by 2008. That is 3.5% of the 1.4 million jobs Germany currently has in this sector. On the other hand, some of the shortage in IT specialists, which is often cited as a curb on growth, can be alleviated by shifting activities to regions in which skilled workers abound, so to speak.

### Sourcing management: avoiding yo-yo effects

Selective outsourcing of IT processes can trim costs and improve a company's strategic competitive position. Modern IT enables information-intensive service providers with a deep vertical range of manufacture, particularly banks and insurers, to slim down and focus on their core competencies. In so far an "outsourcing fitness programme" can certainly be a promising strategy. Moving processes into offshore regions is the logical continuation of this idea from a cost angle. Accordingly, the international market for outsourcing services looks set expand dynamically in the coming years.

Yet IT outsourcing is not entirely risk-free. Contracting out assignments also entails a loss of control, and reintegrating activities once outsourced is an extremely involved business. Mindful of this, ahead of any outsourcing decision each company must examine and assess for itself the importance of the processes up for discussion and consider the consequences of contracting them out. It is the highly significant task of sourcing management to put together and see through the best-suited "outsourcing diet" – one that will avoid those dreaded yo-yo effects.

#### IT outsourcing market volumes

	2003	2008	08/03 p.a.
	in EUR bn		in %
<b>IT outsourcing</b>			
Germany	10	17	11.2
Europe	45	100	17,3
<b>IT offshoring</b>			
Germany	0,4	0.8	14.9
USA	54	70	5,3

Source: DB Research

## 2. The outsourcing decision from the point of view of the service user

### Tasks that can be outsourced

In principle, practically all the business processes that do not belong to a company's core competencies can be outsourced, i.e. contracted out to an external partner. Core competencies determine a company's competitiveness and the way in which it sets itself apart in the marketplace. Major management processes cannot be outsourced either, as it is these that make the company what it is.

### The core business determines what can be outsourced

A manufacturing company could outsource its entire production if its major key competencies lay in development or distribution, say. But of course individual parts, or indeed most, of the total value chain can be handed over to partners or service providers. Many companies in the automotive and electrical engineering industries, for example, have reduced their vertical range of manufacture by contracting out upstream processes, notably the production of complete modules, and downstream processes such as distribution and service. The decision on which processes can be outsourced will therefore be based on identification of the company's core operations.

### Outsourcing complete business processes

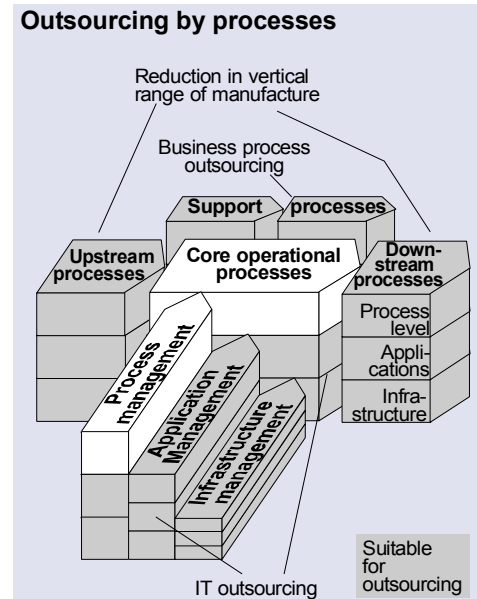
Many support processes, such as the procurement of minor-value goods or payroll accounting, can be assigned completely to external service providers, given that they are not usually of any strategic importance and feature a high level of standardisation. This is described as **business process outsourcing (BPO)**.

### IT outsourcing: different levels

These days, almost all business processes are carried out with a certain amount of IT support. We can distinguish here between the **process level**, at which the technical and organisational aspects of the respective process are located, the **application level**, which comprises the software used for process support (e.g. ERP systems), and the **infrastructure level** (hardware, networks, operating systems etc.). With IT outsourcing the client keeps hold of the process level, whereas all or part of the application and infrastructure levels can be handed over to external providers.

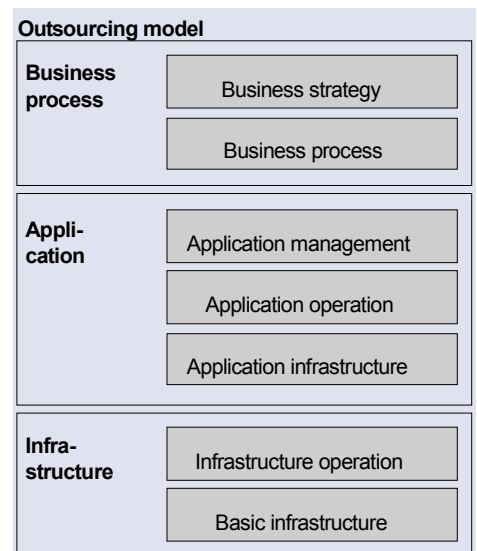
### Outsourcing application and infrastructure management

**Application and infrastructure** operation also requires a number of business processes. Application management includes, for example, maintenance, servicing, support and optimisation of the software used as well as the development of new application software. When application management is contracted out, the infrastructure is generally outsourced along with it, i.e. the applications are located with the provider, who runs them for the client. Another alternative consists of outsourcing application management only. In this case the infrastructure and the applications installed on it remain with the client but are operated by an external provider.



**Processes of no strategic importance can be comprehensively outsourced**

**IT outsourcing comprises applications and infrastructure**



Infrastructure management comprises, among other things, operation of the data processing centre as well as support, further development and optimisation of the entire IT infrastructure.

Unlike application and infrastructure management, process management – that is to say designing, monitoring and further developing the business processes remaining in the company (in particular the strategically important core processes) – should not be surrendered. This principle holds true even if the applications and IT infrastructure used in these processes are outsourced.

### **Business process outsourcing requires compatible systems**

When complete processes are contracted out, specific IT outsourcing is not usually an issue, because in taking over an entire process the provider also assumes responsibility for the IT used for it. But it is necessary to make sure that the provider's information systems can be integrated into the company's own, and to determine how this is done, to enable continuous feed-through. If the processes that are to be outsourced are fully automatic, the borderline between business process outsourcing and IT outsourcing becomes blurred, because for all practical purposes application operation implies assumption of the entire processing. An illustration of this in the financial services sector is straight-through processing (STP), i.e. fully automatic processing of financial transactions.

**Outsourced processes must fit in-house processes**

### **Comprehensive outsourcing**

The most extensive form of IT outsourcing is known as “**comprehensive outsourcing**”. This entails contracting out to a service provider the entire IT, encompassing infrastructure and application operation as well as infrastructure management and application management, e.g. the development of new applications. In cases such as these the provider usually takes over entire IT departments from the client, with the staff switching to this IT provider or to a joint venture company between the client and provider. Comprehensive outsourcing always involves customised services, as the service provider has to adjust to the client's processes and existing IT environment.

**Comprehensive outsourcing: a provider takes over the IT department**

**Business Transformation Outsourcing (BTO)** goes even further. Here, the aim of the outsourcing partnership is not merely to take over predefined services, but to create innovations and significant process improvements for the service user, with both companies making investment and both profiting from its success.

**With Business Transformation Outsourcing both partners benefit from innovations**

### **Outtasking**

Where, on the other hand, only specific, IT-related tasks are contracted out, we speak of “**selective outsourcing**” or “**outtasking**”. The boundary between outtasking and outsourcing is fluid. Outtasking services range from conception through operation to maintenance of the IT systems. While the provider assumes the responsibility for IT operations, the client retains control. IT outsourcing is not comprehensive; only those areas in which relief is most urgently needed are contracted out.

In application outsourcing, the term “hosting” is used to define scenarios in which applications are provided and run exclusively for the client on dedicated hardware. There are also Application Service Providing (ASP) scenarios in which the client simply uses the applications in question, e.g. through a Virtual Private Network (VPN) connection, and the provider is at liberty to choose the

hardware used to run them on in order to meet the agreed service levels.

## Outsourcing opportunities and motives

Companies will outsource one or more of the tasks described when they expect benefits from having these services performed by an external provider.

- **Cost benefits**

Through specialisation in certain fields and scale effects such as those created by many clients sharing the use of a data processing centre, a provider can often perform services at lower costs than a company could itself. Added to which, the company does not have to spend large sums investing in the development of an infrastructure. The only costs incurred are running expenses in the form of the provider's service charges. Outsourcing variabilizes fixed costs. This is a key driver of IT infrastructure outsourcing (Utility Pricing Model).

**Running expenses instead of high initial investment**

- **Flexible adjustment to requirements**

The services purchased can be adjusted flexibly to the varying workload. This saves the company having to hold excess IT capacities available simply to cover peak demand periods. Entirely new possibilities are opened up by the development of grid computing, which enables the use of computing capacities on demand simply by "plugging in", as it were. But even in an environment like this, the actual applications first have to be introduced and tailored to the individual clients' requirements and then serviced on an ongoing basis; so there is still need for appropriate outsourcing service providers. These then additionally assume brokering functions by procuring the computing capacity their clients need through the grid at any one time at the most competitive price and providing it in the form of a performantly running application. For most companies, however, grid computing will not be of practical relevance for some years to come.

**Own IT resources no longer need be dimensioned for peak demand periods**

- **Cost transparency**

Whereas it can be very difficult to calculate the actual cost of a service within one's own company, with outsourcing these costs are clearly specified in the contract and invoices.

**Difficult to calculate actual costs in own company**

- **Concentration on core competencies**

Contracting standardizable tasks out to external service providers eases the burden for management. They can then focus more on their core competencies – the factors that set them apart from their competitors.

- **Outsourcer's/service provider's know-how**

For activities that the company carries out itself it must hold available the necessary know-how and constantly build on this. In many cases smaller companies in particular find it difficult to engage sufficient appropriately specialised staff, or they become heavily reliant on individuals. When the task is assigned to service providers, these are the ones that have to possess the requested know-how. Providers of this kind also find it easier to keep pace with rapid technological development and introduce new technologies and software releases, particularly where frequently used standard applications are concerned. For special applications, though, it will be difficult to find a service provider with the appropriate know-how.

**Small businesses in particular often lack the necessary know-how**

- **Risk reduction**

Even if the tasks that can be outsourced are not normally critical to competitiveness, problems that arise can nevertheless put the company at serious risk. The damage incurred if a computer centre is down for a longish time can easily run into the millions. By outsourcing data processing operations and similar tasks the company itself is relieved of this risk, having passed responsibility and liability for performance of the agreed services on to the outsourcing services provider. But this does not apply to all risks and across all industries. For strategic and regulatory reasons banks, whose core competence lies in risk transformation, cannot outsource the management of, and liability for, certain risks.

- **Defined service level**

Before a task can be outsourced, a standardised service with a defined service level, i.e. with guaranteed availabilities, response times and quality standards, must be agreed with the provider. Within one's own company, organically evolved structures often make it very difficult to introduce and enforce performance definitions and service level agreements of this kind, however. Outsourcing therefore gives the outsourcer a chance to obtain services of constantly high quality, reliability and security. Ultimately, this also has a positive effect on the quality of the core processes.

- **Wage bargaining effects**

An advantage of outsourcing that some companies deliberately pursue, although reluctant to discuss it in public, is the leverage it gives them when faced with excessively high wage demands from their own workforce. For example, the wages paid by specialised call centre operators, with which an outsourced own call centre now has to compete, are well below those at most big companies.

**The outsourcing services provider is liable for services performance**

**Constantly high quality, reliability and security**

**Wages at service providers often lower than in big companies**

## **Risks of outsourcing**

- **Reliance on the service provider**

The outsourcing firm exposes itself to heavy reliance on its service provider. Most outsourcing contracts run for several years, and handing over IT resources and business processes to the provider involves substantial expense for both parties. Consequently, a change of outsourcing provider or inhousing, the term used to denote retraction of outsourced activities to the outsourcing company, is generally considered only as a last recourse. Should it emerge in the course of time that the provider is not meeting requirements, the client has only limited means at its disposal to remedy the situation. A substandard provider can thus pose a genuine threat to the company. Since it is usually sensitive data and business-critical processes and applications that are outsourced, there basically exists a danger of misuse or a hacker attack if security leaks occur with the provider.<sup>7</sup> Bankruptcy on the part of the provider would likewise plunge the client into serious difficulties.

**Difficult to change outsourcing provider**

- **Loss of know-how**

Dependence on a provider is heightened by the fact that the know-how for the outsourced activities is no longer available within the company itself. This means the company would no longer be in a position to resume these activities itself if

**Knowledge no longer in-house**

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<sup>7</sup> That is why clients prefer to outsource application management, while hardware and applications stay with the client. With them, business-critical data thus remain within the customer's jurisdiction.

necessary. Whilst this is not all that critical with regard to standard processes and activities, where services tailored very closely to the individual company are concerned it can cause major problems in an emergency.

- **Loss of control and expensive alterations**

The company also loses much of its control – depending on the type of outsourcing contract – over how the activities it has farmed out are conducted. The service provider is responsible for implementation, all that is specified is the services to be made available. Where these have not been described precisely and completely enough in the run-up with appropriate SLAs, conflicts frequently arise because the provider is generally only prepared to deliver at the agreed price the services actually set out in writing. The insourcer can command high prices for any amendments necessary, given that the client's dependency places it at a negotiating disadvantage.

- **Cost benefits often questionable**

To deliver appreciable cost benefits for the client and still earn a profit margin for itself, the provider must be able to offer the services in question at roughly a third lower cost than the customer. Where this really is possible, it would seem to suggest that the customer has hitherto failed to exploit substantial cost-cutting potential in-house. Faced with an efficiently managed IT department, providers will no doubt find it very difficult to deliver the same services much more cheaply. Where they do still offer services so economically, there is a danger of the quotation having deliberately been set too low simply to win the order. To generate the necessary margin, the provider will subsequently have to resort to over-priced amendments. This will eliminate the initial cost benefits to the customer. Conventional wisdom says that lower production costs mean priced-up contract initiation and monitoring costs.

- **Definition and measurement of the services purchased is difficult**

The careful requirement analysis and precise service specification necessitated by the above involve considerable input. Problems could also arise with performance measurement and quality control, because the client does not usually possess the right tools with which to measure, for example, the level of application software availability actually attained.

- **Expenditure on the management of organisational interfaces**

Outsourcing creates new organisational and technical interfaces. Organisational interfaces in particular, e.g. the interaction between users, internal application experts and external support, cause additional expenditure and are a possible source of problems. The need for coordination with the provider is another cost driver that may considerably trim the cost benefits. But without prudent management of the outsourcing relationship there is greater risk of the project failing or the hoped-for benefits not materialising.

These problems are frequently underestimated, particularly when an in-house IT department is hived off into a separate company. To begin with, cooperation still works quite smoothly, as it is taking place between former colleagues. But with increasing staff changes at the provider and the emergence of a genuine buyer-supplier relationship, the need for provider management grows.

**The outsourcing provider must be able to offer the same services at appreciably lower costs**

**Precise service specification involves considerable input**

**Lack of coordination can lead to project failure**

- **Resistance by the employees affected**

The changes in a company triggered by any outsourcing project naturally give rise to fears and resistance among the employees concerned. In major outsourcing projects the workers previously employed on the processes that are now being outsourced often have to move to the service provider. Giving up processes and staff not infrequently means a loss of prestige for the managers of the departments involved. This highlights the importance of efficient change management.

- **Precise service definition complicates changes**

We have already discussed the need for precise definition of the outsourcing services in the contract. Often, however, the framework conditions alter during the term of the contract. The client may, for instance, merge with another company, or a new software version may come onto the market that would serve the client better than the previous one. In cases like these detailed performance specifications can prove unproductive. As a result, what would have been meaningful changes are often not made, turning the outsourcing relationship into a drag on innovation. If the contract is amended during the term, this can be expensive, as already mentioned.

- **Scale effects marginal with customised services**

The less standardised the externally procured service and the more activities that are performed individually for the client, the less the cost benefits previously discussed can be realised through economies of scale. Unlike the operation of a data processing centre, the same resources cannot be used for more than one firm when company-specific applications are involved. Nor can services such as application development be scaled as required, which tempers the flexibility benefit of the outsourcing project. Where services of this kind are performed by former IT departments of the client's that have been taken over by the service provider, these will inevitably find it difficult to deliver more cheaply. In most cases there seems to be hardly any way in the first few years of shedding staff or cutting salaries.

- **Cost comparison difficult**

What is more, cost comparisons are awkward with such customised services, because it is very difficult to calculate the costs incurred with proprietary performance. Consequently, there is hardly any reliable way of gauging whether a project, especially a comprehensive outsourcing venture, will be worthwhile for the company. And the advantages of a service provider's technical lead and better know-how do not come into play for big corporations either, since their quite considerable IT departments possess, or are in a position to build up, comparable features. In terms of the aforementioned benefits from standardised procedures and applications, guaranteed service levels and clear cost structures, too, big firms must consider particularly carefully whether they might not equally achieve these goals with projects within their own IT organisation.

- **Internal problems cannot be outsourced**

Many decisions to outsource IT operations are prompted by serious problems within the company's own IT department. By handing these tasks over to an external service provider, the firms hope to rid themselves of their difficulties comparatively easily. This is problematic in the extreme, given that successful outsourcing predicates the creation of properly functioning, standardised processes and applications. Existing problems

**Giving up processes and staff means loss of prestige**

**The outsourcing relationship can turn into a drag on innovation**

**Non-standardised services prevent multiple use of resources**

**Own costs often not known**

**Own problems need to be resolved prior to outsourcing**

therefore need to be resolved before IT tasks are outsourced, otherwise failure is likely.

## The design levels of outsourcing

The relationship between client and outsourcing service provider is a very complex one. To avoid failure, both partners must therefore manage the relationship actively on an ongoing basis, all the more so in the case of very extensive outsourcing involving few standardised services.

For management of the outsourcing relationship we distinguish between the following design levels.

### 1. Strategic level

At this level it must first be decided which tasks constitute the company's core competencies and which can essentially be outsourced. The more comprehensive the outsourcing project and the more critical the outsourced activities are for the company, the more strategic in nature the decision will be. In the case of comprehensive outsourcing, for example, the company must decide on the outsourcing provider it wishes to enter into a strategic partnership with. Together with this provider, common objectives should be drawn up to serve as a guideline shaping the outsourcing relationship, also in respect of the contract amendments that will inevitably become necessary in the medium term. The provider should be familiar with the client's objectives and have as its own objective to add clear business value for the client and, together with the client, to achieve constant improvements to the benefit of both partners. With outsourcing projects of strategic importance, regular coordination at board level should be scheduled from the outset.

### 2. Contractual level

Once a suitable outsourcing service provider has been found, the projected cooperation will be set out in a contract. Formulation of an agreement acceptable to both parties that will serve as a practicable basis for day to day work is one of the most difficult tasks. Besides pricing, detailed service specification and process description is necessary, containing the appropriate SLAs on availabilities, reply times, response times etc. Checking the agreements, possible penalties for breach of contract and obligations upon termination of the contract are also part of this. The contract thus defines the contents of the following three levels. Given that changes will inevitably have to be made in the course of years-long outsourcing cooperation, there will be a need for regular consultations and joint drafting of amendments to the contract. It is not therefore unusual for weaknesses in practical implementation to be revealed in the first year of implementation that have the effect of increasing costs (e.g. under-licensing, shortcomings in disaster recovery). Thorough (ex ante) due diligence can prove helpful in this respect. Even so, ex post corrections are almost always necessary, and a clear awareness of this will temper any frustration and recriminations on the part of the service provider and client.

### 3. Coordination level

To ensure that cooperation develops as contractually agreed by both partners, it is necessary to check that the services are being performed and the appropriate service levels observed. By the same token, fulfilment of the customer's commitments as the prerequisite for proper work by the provider must also be monitored. To measure and evaluate the service levels reached,

## Design levels of the outsourcing relationship

### 1. Strategic level

- Definition of core competencies
- Outsourcing decision

### 2. Contractual level

- Prices
- Service specification incl. SLAs
- Definition of the contents of levels 3-5

### 3. Coordination level

- Ongoing monitoring of cooperation
- Measurement of service levels
- Joint problem resolution

### 4. Operational process level

- Handling of day-to-day processes
- Clearly defined processes and process interfaces

### 5. IT level

- Applications
- Infrastructure
- Interfaces

**Formulation of the contract is one of the most difficult tasks**

**Problem cases demand clearly defined jurisdictions and procedures**

jointly defined measurement rules and procedures must exist. Each party should appoint a manager responsible for coordinating the outsourcing relationship. They will meet regularly to identify any problems early on and move swiftly to remedy them. There must also be clearly defined jurisdictions and procedures for emergencies and critical situations. In the case of banks this is even required by law (German Banking Act, KWG § 25a).

#### 4. Operational process level

This level refers to handling of the day-to-day processes. Where IT support is outsourced, for example, procedures must be established for reporting a problem and repairing a workplace PC or a fieldworker's notebook. Processes carried out comprehensively by the service provider (e.g. maintenance work at the provider's computer centre) are of no interest to the client. As far as the client is concerned, it is sufficient for the processes to be designed so as to guarantee compliance with agreements on the service levels concerned. The client should, however, make sure it is granted the right to check these processes at the provider's so that it is in a position to verify their suitability as necessary (e.g. in the course of supplier certification). The more closely the provider's processes are linked with those of the client, the more precisely they must be defined. This applies, say, to user support or application development. As a general rule, the partners should seek to define as clearly as possible the process interfaces between them. The customer must also take steps to ensure that its staff observe the processes defined and do not try and remedy IT problems themselves to save being billed internally with the support fees. The reference models in the Information Technology Infrastructure Library (ITIL) originally developed on the initiative of the British government and now taken as the de facto standard for IT services can, for example, be used as a guideline for definition of the IT processes.

**Clearly defined process interfaces facilitate day-to-day work**

#### 5. IT level

Finally, the outsourced applications and infrastructure, including interfaces, access possibilities, security stages etc., are located at this level.

**IT-level: applications and infrastructure**

Specific design of the contents of all five levels will depend on the type of outsourcing. Whereas extensive activity at all levels is necessary with comprehensive outsourcing of corporate IT, it will frequently be possible to arrange the hosting of a standard web shop for a small or midsize business on the basis of standard agreements and using standard provider reporting. But even in the latter case the client should examine carefully the problem resolution and coordination mechanisms to which it can take recourse in case of doubt.

### 3. The business case for outsourcing

A common way of assessing whether an IT project is worthwhile is by calculating the return on investment (ROI), balancing the costs incurred against anticipated revenues or cost savings. Where the revenues and/or cost-saving effects are higher than the costs, the project is worthwhile. It would appear logical to assess outsourcing decisions in the same way. However, this entails a number of problems. Particularly when outsourcing comprehensive service packages, as a rule the client does not know what it has cost so far to produce these services itself. Very few companies at present systematically calculate the Total Costs of Ownership (TCO) of their IT. And even if the relevant figures are available, the definition and specification of the individual services costed do not generally correspond to the descriptions of the services contained in the outsourcing package. Nor can an exact figure be put in advance to the effects on the IT costs of the standardisation and consolidation that must take place ahead of an outsourcing project. Added to this is a high degree of uncertainty over the changes that will occur almost inevitably in the course of a longer-term outsourcing contract and whose scale cannot be gauged in advance. For these reasons an outsourcing decision can, if at all, be based on strictly cost considerations only in the case of very clearly defined and highly standardised services. No reliable ROI calculations that might be applied to other cases as well are therefore available for outsourcing more complex services.

That said, in order to obtain a general idea – at least roughly and on the assumption of unchanged circumstances – of whether the overall costs of an outsourcing commitment are significantly below those that would otherwise be generated in the company itself, the cost angle should not be neglected. Such costing also makes it possible to compare different outsourcing scenarios and providers.

#### The costs of outsourcing

The cost side must allow for any non-recurrent costs incurred at the beginning of the project as well as for running costs. Whether one-off payments have to be made to the service provider at the start of the project, and if so in what amounts, will depend on the kind of outsourcing and type of contract. Basically, though, expenses may arise in the form of set-up and project costs for building up the relevant service and tailoring it to the client's specific requirements (e.g. customizing an ERP system). Then there are the costs of hardware and software, unless these are carried by the provider and factored into the current charges.

Even within the outsourcing company, account will have to be taken of not inconsiderable one-off expenditure at the beginning of the project. This includes personnel expenses for requirement definition and the selection of a provider. Similarly, consideration must be given to the outlay on service description, which will be drawn up in collaboration with the provider, and on contract negotiations. The necessary standardisation of processes and applications represents another substantial cost item. As a rule, the client will also have to set up a project team to work with the provider on building up customized services or adapting existing services to the client's special needs. The same applies to testing the service provided.

Foremost among the running costs are the service provider's fees. If these are volume-based, different scenarios should be worked through. Depending on the contract, current software licensing or maintenance fees may also be billed.

Costs	
<b>Non-recurrent costs</b>	
Payments to provider	<ul style="list-style-type: none"> <li>• Set-up costs</li> <li>• Project costs</li> <li>• Hardware and software</li> </ul>
Internal costs	<ul style="list-style-type: none"> <li>• Requirement definition</li> <li>• Selection of provider</li> <li>• Service definition</li> <li>• Contract negotiations</li> <li>• Standardisation of processes and applications</li> <li>• Project cooperation</li> </ul>
<b>Running costs</b>	
Payments to provider	<ul style="list-style-type: none"> <li>• Provider fees</li> <li>• Software licensing fees</li> <li>• Maintenance fees</li> </ul>
Internal costs	<ul style="list-style-type: none"> <li>• Management of the outsourcing relationship</li> <li>• Coordination and supervision</li> <li>• Communication costs within the operational processes</li> <li>• Line charges</li> </ul>

**Set-up and project costs are incurred at the outset**

**Substantial expenses also arise for the client**

Current expenses will also arise in-house. These include the resolution of problems in management of the outsourcing relationship at strategic and contract level, and most particularly in coordination, i.e. monitoring service levels. Finally, the processes that remain in the company can create an element of extra expense. If, for example, the operation of an application is outsourced but its management retained in-house, additional communication inputs may be necessary between the staff working on the two processes but now located in different companies. And then, of course, there are the line costs resulting from the additional data traffic caused by the use of an application located with the provider.

### The cost-savings from outsourcing

On the cost-cutting side, too, a distinction must be made between initial non-recurrent economies and ongoing savings. One-off savings can be obtained in particular through the elimination of investment that would otherwise have had to be made in hardware and software (unless this is provided exclusively for, and paid immediately by, the client). Equally, the expenses that would have been incurred, in the case of in-house operation, with the implementation and customisation of this hardware and software by internal employees or external consultants can likewise be chalked up as cost savings. The outlay required for these activities even in the case of outsourcing has already been expensed in the cost account. In extreme cases in which fully customized services are provided for a client, this expenditure will completely cancel out the relevant cost-savings. But where highly standardised services are involved, the implementation and launch expenses are shared among a large number of customers and can therefore be offered at lower prices.

Essentially, current savings are obtained in labour costs, given that work contracted out, such as infrastructure and application management or comprehensively outsourced processes, no longer has to be carried out in-house. Here too, the principle applies that the more the provider can exploit scale effects with standardised services, the more cheaply these services, which are expensed as current fees for the client, can be offered. Another key factor is low rates of pay at the provider, which is particularly the case with offshoring.

In practice it is extremely difficult to quantify savings potential. This is, firstly, because not yet foreseeable future developments and necessary changes can soon upset the entire calculation and, secondly, the actual costs of carrying out the work in-house are not usually known. Ideally, the company should first conduct a cost analysis of its own processes. In practice, though, this is frequently skipped, with the result that the estimates made are fraught with a considerable element of uncertainty – particularly if they come from the outsourcing supplier.

### Assessment of the opportunities and risks

As already discussed, in only very few cases can an outsourcing decision be based purely on cost considerations. One possible approach is therefore to weight the benefits and risks described in the above in terms of their importance to the company. This can be done, for example, through the allocation of weighting factors on a scale of 0 to 10. By way of comparison, risks are entered with the opposite sign, i.e. absence of the risk in question is included as a criterion for the outsourcing decision and rated in terms of its importance for the company. The costs and savings similarly

### Coordination causes running costs for the client

#### Savings

##### One-off savings

- No investment on hardware and software
- Project costs for own project launch are eliminated

##### Current savings

- Elimination of expenditure on in-house operation of comprehensively outsourced processes
- Elimination of expenditure on outsourced application management activities
- Elimination of expenditure on outsourced infrastructure management activities

#### „Ready reckoner“ for/against an outsourcing decision (section)

Criterion	Importance (0-10 points)	Achievement level with outsourcing	Weighted points Outsourcing	Achievement level with own operation	Weighted points Own operation
In-house know-how does not have to be developed	6	50%	3	0%	0
Variabilization of fixed costs	9	80%	7.2	20%	1.8
Risk of application operation is shifted to the provider	3	90%	2.7	0%	0
Any changes possible at any time etc.	6	30%	1.8	100%	6
<b>Weighted total</b>			<b>14.7</b>		<b>7.8</b>

The values entered are by way on illustration.

established should also be taken as one of the criteria in the “ready reckoner” for outsourcing decisions.

An estimate is then made for each criterion of the percentage to which it is met in an outsourcing scenario and the percentage when the relevant services are performed in-house. This gives weighted scores that are then added to form a total, with the higher score representing the more beneficial decision according to the weightings assigned.

With a “ready reckoner” of this kind different assumptions and possible weightings can be compared, making the fundamentals underlying a decision transparent. Illuminating the reasons and assumptions for a project and, most importantly, its objectives helps a company arrive at an outsourcing decision on the strength of more than simply a “gut feeling”.

## Business cases for different types of project

We have already seen that the business case for outsourcing differs fundamentally depending on the size and type of the project.

The smaller the company and the more standardised the services to be outsourced, the more readily the case for outsourcing can be made with strictly cost considerations.

Small companies often lack the critical mass to carry out a certain type of work more economically than a service provider. Even for a small business, operating the entire infrastructure for a webshop or an ERP system with certain minimum availabilities requires a team of several people. A rule of thumb says that it does not make good business sense for a company to operate an ERP system of its own with fewer than 300 users. Similarly, computer centres processing less than 1,000 MIPS (million instructions per second) are not generally economical. In cases like these there is a clear business case for outsourcing. Moreover, often the company in question does not possess the internal know-how needed to build up its own operations.

Selective outsourcing generally refers to the contracting out of a clearly specified service, such as the operation of a server or the provision of an application system for trialling purposes. The cost of this can be captured relatively well, so that an ROI calculation like the one described above has a comparatively high information value.

But for the reasons mentioned previously, there seems little to be gained from viewing the outsourcing of less standardised services by large companies, as with comprehensive outsourcing of corporate IT, purely from a cost angle. Here, a business case cannot be made without including other factors. For example, the advantage of a reduction in the pool of fixed costs must be weighed against the disadvantage of possibly becoming reliant on the provider of the outsourcing services. Equally, the benefit of better concentration on core business has to be set against possible problems with precise but inflexible contract terms.

## The provider

### Types of service providers

The outsourcing market is heterogeneous in the extreme. We can distinguish between the following main types of service provider.

- **Consultancies:** A number of big management consultancies offer global comprehensive outsourcing. They include Accenture, Cap Gemini Ernst & Young and Atos Origin.

**Clear cost advantages for smaller companies in particular**

**Costs of standardised services can be easily compared**

**Cost considerations alone do not suffice with comprehensive outsourcing**

- **Major IT outsourcing providers:** They already have years of experience in this field. The most prominent example is the company EDS.
- **Standard software producers:** A number of software producers also offer outsourcing services. They usually specialise in the operation and management of their own proprietary applications. Examples are SAP, Peoplesoft, Oracle.
- **Service divisions of technology firms:** Companies whose core business was originally the production of hardware concentrate as outsourcing providers either on providing and operating this hardware, such as Hewlett Packard, or they offer comprehensive IT and outsourcing services, like IBM.
- **Telecommunications companies:** Big telecoms suppliers are also extremely interested in outsourcing business. A typical example is Germany's Deutsche Telekom, which plays an important part with its service subsidiary T-Systems.
- **IT service providers:** These come from different fields, e.g. application development, systems integration or IT consultancy. Siemens Business Services (SBS) is one example.

The market for comprehensive outsourcing by big corporations is dominated by a few major providers. But a large number of specialised providers are to be found in the field of selective outsourcing. These focus, for example, on operating computer centres or hosting special applications. The services they offer can differ quite considerably (see sidebar).

In addition to independent companies, outsourcing service providers can also be fully-owned subsidiaries of the service user. This is often the case when a company spins off its existing IT department into a separate firm. Joint ventures are a third form of outsourcing service provider.

These operational forms are also found in the offshoring segment. Some central European companies set up subsidiaries in the offshoring destination or in a nearshoring country. Agencies frequently facilitate collaboration with external service providers located exclusively in the offshoring country. But Indian software firms, for instance, are also increasingly setting up branches in Germany through which to coordinate cooperation with the service user.

### Choosing the provider

Choosing the right service provider is crucial, given the high degree of reliance; and the more comprehensive and business-critical the services being outsourced are, the more vital this choice becomes. Careful scrutiny and assessment of the potential companies and their services should therefore be an absolute must, even if the selection process does take several months as a result. Where individual service components can expediently be singled out from the complete outsourcing package, it may be a good idea to begin with a small outsourcing project as a means of becoming more familiar with the outsourcing provider before signing a more extensive contract.

### Important criteria for selection of the provider

- **Knowledge of the industry:** While this tends to be secondary for the assumption of strictly infrastructure-related tasks, it becomes more important when, say, entire business processes or the design of new application systems are to be outsourced.

### Example: Outsourcing alternatives from an ERP hosting provider

#### Evaluation hosting

Short-term provision of an application for evaluation purposes

#### Implementation hosting

Short-term provision of an application to develop a solution for the client. The client can subsequently take this over or continue to have it operated by the provider

#### Application hosting

Permanent operation of an application for the service user

#### Remote application operation

Disturbance-free productive operation via remote link

#### Application management

Administration and process supervision of an application system incl. upgrade/migration and extended customizing

#### Upgrade hosting

Provision of the infrastructure and system environment for an upgrade to a new system version and implementation of the upgrade

#### Hosted learning

Provision of a demo system for training purposes

### Heavy reliance on the provider calls for careful selection

- **Proof of competence** in respect of the tasks being taken over. An outsourcing provider should, for instance, have experience with introduction and operation of the system in question and display a willingness to invest in state-of-the-art products.
- **Suitable size and structure:** Comprehensive IT outsourcing by big companies can be handled successfully almost only by the really big, internationally operative IT service providers. Midsize companies possibly requiring selective outsourcing, however, are usually better served by smaller, specialised providers whose size and client structure make them more likely to speak the language of smaller businesses and able to put together adequate packages.
- **Technical equipment and staff:** This must be such as to enable the outsourcing provider to comply with the Service Level Agreements. Further important aspects here are security and a uniform seven-day, 24-hour process support service.
- **Financial stability:** The provider should stand a realistic long-range chance of being able to survive in the marketplace and fulfil its contractual commitments.
- **Scope for expansion:** Even if the company is initially eying the possibility of outtasking only, it may later wish to assign further work to the provider. If the potential capacity is not available for this, it may become necessary to switch outsourcing providers or enlist the services of a second firm.
- **Contractual arrangements:** The terms of contract proposed by the outsourcing provider should take account of the customer's concerns, e.g. with clearly defined services that the customer actually needs and obligations on the part of the provider that can be readily checked. The contract should also contain penalties for non-compliance with the agreed service levels, clear exit mechanisms etc. This bears witness to the provider's commitment to a trust-based partnership and shows it is not simply out to exploit a client once gained.

**Client and provider should be suited in terms of their structure**

**Possibility of checking the provider's obligations**

#### **Assessment and recommended action**

IT outsourcing has meanwhile become a trusty tool for the IT manager, and sometimes also for the company's senior management. In many fields contracting out IT work is a promising alternative to the internal provision of these services. Firms that do not consider outsourcing at least as an option are passing up enormous opportunities.

That said, outsourcing – and comprehensive outsourcing in particular – has also become a trendy issue, played up not least by consultants that have seen their traditional business collapse during the economic slump. If attention is not paid to the previously-discussed risks and prerequisites that must be in place on the customer's side, the danger of failure is great. Meanwhile, a number of outsourcing projects have been deemed abortive, and the companies concerned have reversed the process by insourcing. In the light of this, the outsourcing euphoria prevalent in many quarters is likely to abate in the future.

Yet companies that approach the subject with due caution and hold aloof from current fads, opting for outsourcing when it produces specific and demonstrable benefits, will benefit enormously from IT outsourcing.

Only where outsourcing projects refer selectively to very limited, clearly circumscribed tasks, such as outsourcing business applications for small businesses, can they be based on purely cost arguments. Many selective outsourcing services can, moreover, be

**Nowadays outsourcing is a trusty tool for the IT manager**

standardised and offered as modules that can be put together according to a company's individual needs. But big-ticket, comprehensive outsourcing projects must be justified by strategic considerations.

Outsourcing decisions will always be unique choices geared to the specifics of the company concerned. So far no general IT commodities have emerged whose external procurement is, as a rule, more economical. Consequently, IT outsourcing is a management issue and not a purely IT concern. Successful outsourcing strategies hinge on a clear-cut decision on which processes belong to the company's core assignments. Outsourcing decisions must be embedded in a consistent overall architecture of corporate processes, within which the company can decide which tasks are to be carried out internally and which externally.

Under no circumstances should a company seek to offload existing problems by contracting out the relevant functions to an outsourcing provider without due reflection. This is a recipe for disaster.

Outsourcing projects require careful preparation. Besides the choice of service provider and the definition of Service Level Agreements etc. this entails in particular standardisation of the company's own processes and the creation of defined process interfaces to the service provider's processes. Once established, an outsourcing relationship needs ongoing control and further development by the client.

The focus of outsourcing activities is currently shifting from the infrastructure level through the application level to the business process level. This trend is expected to persist.

Instead of simply making use of a technical service such as the provision and maintenance of a server, in future it will be possible to have outsourcing providers deliver more comprehensive business services with defined service levels. To guarantee these, providers will be obliged to develop increasingly standardised application platforms. In most cases these will be based on one of the market-leading application systems (e.g. from Oracle, SAP or Peoplesoft). This will have implications for the applications remaining with service users, which should be compatible with the service providers' platforms.

In the medium term the trend points to business process outsourcing (BPO). So far, though, BPO has become established practice in only a few fields, notably finance, human resources management and call centres. Other hotly debated topics such as "IT utilities" or "computing on demand", i.e. the procurement of computing services as a commodity as and when they are required, are also visions for the future. For most companies this will be a realistic option only in five to eight years' time, once grid computing has become established and the necessary capacities are available. Until such time these issues will serve more as a sales pitch for further IT consultancy services. At present most companies are best advised to concentrate on the selective outsourcing of applications and their management.

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## **Outsourcing is a management issue**

## **Concentration on selective outsourcing a sensible policy**

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The outsourcing decision from the point of view of the service user

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Printed by: HST Offsetdruck Schadt & Tetzlaff GbR, Dieburg.

Print: ISSN 1619-3245 / Internet: ISSN 1619-3253 / E-mail: ISSN 1619-4756